

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

THE CLAIMS

Claim 20 has been amended to clarify the feature of the present invention whereby the permanent magnet is mounted on an end portion of only the first magnetic leg (43c), as shown, for example, in Figs. 15 and 16.

In addition, claim 20 has been amended to clarify the feature of the present invention whereby the closed magnetic circuit is a general closed magnetic circuit which passes through the magnetic gap in the magnetic core but which does not pass through the permanent magnet, as also supported by the disclosure throughout the drawings wherein the magnetic flux makes almost a closed magnetic circuit in the U-shaped magnetic core (43), which is referred to as a general closed magnetic circuit.

It is respectfully submitted that no new matter has been added and that no new issues have been raised which require further consideration on the merits and/or a new search.

Accordingly, it is respectfully requested that the amendments to the claims be approved and entered under 37 CFR 1.116.

THE PRIOR ART REJECTION

Claims 20-22 were rejected under 35 USC 102 as being anticipated by USP 2,774,935 ("Rademakers et al"). This rejection, however, is respectfully traversed with respect to the claims as amended hereinabove.

According to the present invention as recited in amended claim 20, an inductance component (105) is provided which comprises:

(a) a U-shaped magnetic core (43) having first and second magnetic legs (43c and 43b) and a magnetic gap (g) defined between the first and second magnetic legs (43c and 43b);

(b) a permanent magnet (107) mounted on an end portion of only the first magnetic leg (43c) in a vicinity of a general closed magnetic circuit which passes through the magnetic gap (g) in the magnetic core (43) but which does not pass through the permanent magnet (107), for generating a direct-current biased magnetic field; and

c) a coil (45) wound around the second magnetic leg (43b).

With this structure, the permanent magnet is placed

specifically on only the first magnetic leg, at the end portion of the magnetic core, which is not wound by the coil, adjacent to the general closed magnetic circuit and is not inserted in the general closed magnetic circuit (i.e., the magnetic gap). The inductance component of the claimed present invention therefore achieves advantageous effects in that the magnetic flux does not pass directly through the permanent magnet so that the relative reluctance can become lower and enhance the bias effect.

On the other hand, Rademakers et al merely discloses an inductance assembly which is placed in a closed magnetic circuit, as shown in Fig. 4 thereof. In Fig. 4 of Rademakers et al, coils (5, 6) are wound around respective magnetic core legs. Ferromagnetic plates (16, 17) are placed on the end surfaces of the legs, respectively, and permanent magnets (19, 20) are placed on the ferromagnetic plates (16, 17), respectively. In addition, another ferromagnetic plate (18) is placed on the permanent magnets (19, 20) bridging the space between the two permanent magnets (19, 20). Magnetic flux passes from the ferromagnetic plate (16) through one permanent magnet (19), another ferromagnetic plate (18), and the other permanent magnet (20), and the ferromagnetic plate (17), to the leg, in order. And with this structure, the inductance assembly of Rademakers et al has

disadvantages in that the permanent magnet is placed in the closed magnetic circuit and the magnetic flux passes directly through the permanent magnet so that the relative reluctance becomes higher and the bias effect is reduced.

It is respectfully submitted that Rademakers et al clearly does not at all disclose, teach or suggest the structure of the inductance component of the present invention as recited in amended claim 20, and that amended claim 20 and claims 21 and 22 depending therefrom clearly patentably distinguish over Rademakers et al, taken singly or in combination with any of the other prior art references of record, under 35 USC 102 as well as under 35 USC 103.

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In view of the foregoing, entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'DH' with a stylized flourish extending to the right.

Douglas Holtz, Esq.
Reg. No. 33,902

Frishauf, Holtz, Goodman & Chick, P.C.
767 Third Avenue - 25th Floor
New York, New York 10017-2023
Tel. No. (212) 319-4900
Fax No. (212) 319-5101
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